

In the structure of their antheridia and the development of their fruit they certainly present important deviations from the Mosses, which do not permit their complete systematic union with any group of Mosses; but, as in the form of the seminal filaments, so also in the original foundation of the fruit, they agree with the general formative process in the Mosses; for, although the period and the place of impregnation in the *Charæ* are not yet demonstrated, it may nevertheless be asserted with great probability, from well-known and not far-fetched analogies (to which we may now add the formation of the progerms), that in them also it is not the spore-cell which germinates into a prothallium, but a mother-cell preceding this by several generations, that is fertilized. The *Charæ* consequently stand evidently as a peculiar group of the section of Moss-like plants amongst the Cryptogamia.

Moreover, the unexpected occurrence of the progerm in the *Charæ* makes it appear to be a general law (to which, contrary to the earlier views, the *Charæ* are subject as well as Ferns and Mosses) that in all leafy plants the spore never can be directly the vegetative apex of the first leafy axis.

The further development of this preliminary communication will appear, with the necessary bibliographical references and figures, in the next part of my 'Jahrbuch für wissenschaftliche Botanik,' which is already in the press.

XXXIV.—*Description of a new Species of Hydroporus, Clairv.*
By the Rev. HAMLET CLARK, M.A., F.L.S.

Fam. Dytiscidæ.

Genus HYDROPORUS, Clairv.

H. tinctus, n. sp.

H. oblongo-ovalis, subparallelus, sat convexus, post medium paulo latior, ad apicem modice et rotunde productus, crebre punctulatus, leviter pubescens, subopacus, niger, obscure rufo notatus; capite inter oculos undique late et distincte depresso, sparsim punctulato, ad apicem rufo tincto; thorace antice emarginato, lateribus leviter rotundatis, basi sinuata ad medium (scutelli regione) angulata, sparsim et fortiter punctato, antice juxta marginem transverse punctato-striato, ad basin plus minus transverse depresso, ad baseos angulos plus fortiter plerumque foveolato, nigro; elytris thorace latioribus, cum thoracis margine angulum obtusum formantibus, post medium latioribus, leviter punctatis, sparsim pubescentibus, nigris, fascia lata inæquali transversa apud humeros, vitta marginali (post medium in maculam triangularem dilatata) haud apicem attingente, rufis vel rufo-fuscatis, hæ maculæ aliquando obsoletæ

sunt, aliquando omnino absunt; corpore subtus nigro; antennis fusco-nigris; pedibus fusco-nigris, tarsorum articulis anteriorum latis.

Magnitudine variat; long. corp. lin. $1\frac{3}{8}$ – $1\frac{4}{8}$, lat. $\frac{4}{8}$.

A variable species, both in pattern and size; nevertheless the four examples before me (none absolutely identical with the three others) evidently represent a single species, which is abundantly distinct from all others with which I am acquainted: its elongated form, coupled with the greater breadth of the *post-medial* elytra (especially as contrasted with the thorax), and the distinct angle formed by the line of the margins of the elytra and thorax separate it at once from all species found in Great Britain. In our list the name will stand next to *H. palustris*, Linn.

Four examples of *H. tinctus* were detected among a mass of Turner's captures, by my friend Dr. Power: they were captured certainly in the district of the New Forest.

XXXV.—*A Synopsis of the Species of Alligators.*

By Dr. J. E. GRAY, F.R.S. &c.

HAVING had occasion to re-examine the large collection of Alligators in the British Museum for the purpose of naming the more recently received specimens, I am induced to lay before the readers of the 'Annals' an abstract of the result of this examination.

I may observe that Spix, in his work on Brazilian Lizards, gives very good figures of these animals, with the colours well marked; and Natterer, in his 'Beiträge' on South-American Alligators, gives very accurate and detailed figures of the head and the neck-shield of the different species; and he has figured some varieties or species very nearly allied to those here noticed, which I have not seen.

The Alligators (*Alligatoridæ*) may be divided thus:—

- I. *The ventral scutella like the dorsal ones, bony, and articulated together, forming a shield. The eyelids with an internal bony plate. The cervical scutella in pairs, forming an elongated shield. Nasal bone short. Tropical America.*
1. JACARE. The orbits united by a bony cross ridge. Eyelids partly fleshy, striated or rugose.
2. CAIMAN. The orbits not united by a cross ridge. Eyelids entirely bony, smooth.
- II. *The ventral scutella thin, the dorsal scutella bony, not articulated together. The eyelids fleshy, smooth. The cervical scutella in pairs, separate. Nasal bone elongate, separating the nostrils. North America.*
3. ALLIGATOR. The face broad, depressed.